

Appn. No. 09/818,765
Response After Final Rejection filed March 17, 2006
Response to Office Action dated November 23, 2005

REMARKS

Claims 2-4 and 11-20 are pending in this application and have been rejected.

Claims 2-4 and 11-20 have been maintained unchanged. Claims 2-4, 14 and 15 are independent.

Claims 2-4 and 11-15 have been rejected under 35 U.S.C. § 103(a) as being anticipated by German Patent Appln. No. 34 01 071 A1 to Vollert in view of U.S. Patent No. 5,903,292 to Scheffelin et al. and U.S. Patent No. 4,126,868 to Kirner. Applicants respectfully traverse this rejection and submit the following arguments in support thereof.

As explained below, all of the pending independent claims, claims 2-4, 14 and 15, provide for the step of pressing the ink bag with a pressing plate to cause ink to be discharged, either to cause at least in part the discharge of ink or to cause a quantity of residual ink to be discharged.

By way of example only, and not limitation, claim 2 describes a method of refilling a spent ink bag for use in an ink jet recorder. This involves the steps of providing the spent ink bag, the spent ink bag having an ink supply port that is selectively engageable with the ink jet recorder, positioning the spent ink bag, inserting an ink needle into the ink supply port of the spent ink bag, pressing the spent ink bag with a pressing plate, and discharging ink from the spent ink bag only through the port, the discharging being caused, at least in part, by the pressing of the spent ink bag with the pressing plate. After the discharging step comes a step of charging the spent ink bag only through the port with a specified quantity of ink.

Applicants' invention, according to claim 3, relates to a method of refilling an ink bag for use in an ink jet recorder, the ink bag having a flexible bag portion having an interior and being initially filled with ink through a first opening in the bag that is sealed after the ink bag is initially filled. This is done by providing an ink bag, the ink bag having a second opening that is

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different than the first opening, the second opening being an ink supply port selectively engageable with the ink jet recorder, positioning the ink bag, advancing the tip of an ink needle into the interior of the flexible bag portion by passing the tip of the needle through the second opening, and pressing the ink bag with a pressing plate to cause a quantity of residual ink to be discharged through the second opening. The ink bag is charged only through the second opening with a specified quantity of ink.

Claim 4 involves a method of refilling an ink bag for use in an ink jet recorder, the ink bag being initially filled with ink through a first opening in the bag that is sealed after the ink bag is initially filled. This is done by providing the ink bag, the ink bag having, disposed on a line, the first opening and an opposing second opening that is an ink supply port selectively engageable with an ink jet recorder, positioning the ink bag, advancing a tip of an ink needle along the line and through the second opening in the ink bag, pressing the ink bag with a pressing plate to cause a quantity of residual ink to be discharged through the second opening, and charging the ink bag only through the second opening with a specified quantity of ink.

As described in claim 14, this invention also involves a method of refilling an ink bag for use in an ink jet recorder, the ink bag having a flexible bag portion having an interior and being initially filled with ink through a first opening formed by a part of the flexible bag portion and which first opening is sealed after the ink bag is initially filled. This method includes the steps of providing an ink bag, the ink bag having a second opening formed in a port attached to another part of the flexible bag portion and that is different than the first opening, the second opening being an ink supply port selectively engageable with the ink jet recorder, positioning the ink bag, advancing a tip of an ink needle into the interior of the flexible bag portion by passing the tip of the needle through the second opening in the port, pressing the ink bag with a pressing

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plate to cause a quantity of residual ink to be discharged through the second opening, and charging the ink bag only through the second opening in the port with a specified quantity of ink.

Applicants' invention, as set out in claim 15, also relates to a method of refilling an ink bag for use in an ink jet recorder, the ink bag being initially filled with ink through a first opening formed by a part of the flexible bag portion and which first opening is sealed after the ink bag is initially filled. This method involves providing the ink bag, the ink bag having, disposed on a line, the first opening and an opposing second opening formed in a port attached to another part of the flexible bag portion, and the second opening is an ink supply port selectively engageable with an ink jet recorder, positioning the ink bag, advancing a tip of an ink needle along the line and through the second opening in the port, and pressing the ink bag with a pressing plate to cause a quantity of residual ink to be discharged through the second opening. It also includes the step of charging the ink bag only through the second opening in the port with a specified quantity of ink.

Applicants will explain why the claimed steps involving pressing the ink bag with a pressing plate to cause ink to be discharged, either to cause at least in part the discharge of ink or to cause a quantity of residual ink to be discharged, patentably distinguish over the cited art.

The Office Action admits the combination of Vollert and Scheffelin does not suggest the claim feature of pressing the ink bag with a pressing plate to cause the discharge of ink (Office Action, p. 4).¹

¹ "In addition, Voller[t] in view of Scheffelin et al. even through teaches discharging ink from the ink bag by pulling the spring, but do not disclose a pressing plate for pressing the spent ink bag to cause, at least in part, the discharging."

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The Office Action then looks to Kirner to remedy this omission and asserts Kirner teaches the claimed step of using a pressing plate. However, the Office Action does not properly characterize the claimed invention, and it misinterprets Kirner.

First, it must be kept in mind that the claimed invention involves a **method** of refilling a spent ink bag. As a method, this invention is defined with regard to the recited steps. It is irrelevant that the applied references teach structures mentioned in the claims - to suggest the invention the references must teach each and every one of the claimed method steps. As explained below, Kirner fails to suggest the claimed step involving pressing the ink bag with a pressing plate, and the Office Action admits the other references do not teach that step.

The Office Action only speaks of Kirner's structure,

Here, claim 2 includes the step of pressing the spent ink bag with a pressing plate.

Claims 3, 4, 14 and 15 describe pressing the ink bag with a pressing plate to cause a quantity of residual ink to be discharged through the second opening.

Those skilled in the art will appreciate that these pressing steps are carried out in a procedure involving a spent ink bag. That is, they are performed in a refilling process.

When applying a reference under § 103(a) all of the reference's teachings must be considered, not just the portion teaching an aspect of the claimed invention. M.P.E.P. § 2141.02(VI) states "prior art must be considered in its entirety, including disclosures that teach away from the claims". It is not sufficient simply to find part of a claimed invention in the reference - one must also consider the context in which that part of the invention is found.

Kirner has nothing to do with refilling a spent ink bag, Kirner only teaches a method of removing air bubbles from a printer **during a normal printing operation**. So there is

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no suggestion in Kirner that would lead one skilled in the art to apply Kirner's teachings to a method for refilling an ink bag.

Kirner teaches a bleed device for an ink jet printer that allows a user, during normal printing, to remove from the printer's ink supply system gas that was dissolved in the ink and which has formed bubbles in a portion of the ink supply system (col. 2, line 57, through col. 3, line 7). Kirner does this by providing a hand-operated member 9' (which the Office Action characterizes as a pressing plate) that allows the user to raise the pressure in the ink supply system so that the level of ink in the riser pipe increases, causing air bubbles entrained in the ink to escape through capillary tube 6 (Office Action col. 2, lines 62-68).

Assuming *arguendo* that Kirner's flexible wall 9 corresponds to an ink bag, it must be kept in mind that Kirner teaches plate 9' applies pressure to the flexible wall 9 during **routine operation**, meaning that the flexible wall/ink bag which is pressed by pressing plate 9' contains a quantity of ink sufficient for operation. In other words, the pressed ink bag is not spent.

One skilled in the art also would recognize Kirner's plate 9' only is used for removing gas bubbles from the ink supply system during printing, and has nothing to do with refilling a spent ink bag.

Nowhere does Kirner talk about a procedure for refilling an ink bag.

Given the differences in the teachings of Kirner as compared to Vollert and Scheffelin, one skilled in the art looking to find an improved method for refilling a spent ink bag would not be led to combine Vollert and Scheffelin with Kirner (and this assumes Vollert and Scheffelin together involve refilling the spent ink bag).

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The Office Action contends the motivation to combine Kirner with the other references is "to manually control the ink discharge by manually pressing on the pressing plate to apply pressure to the ink bag as taught by Kirner" (Office Action, pg. 4). This asserted justification is not well-taken. Assuming Vollert and Scheffelin teach aspects of refilling an ink bag, as the Office Action says, and Kirner, as noted above, teaches a system for pressing an ink bag during the normal printing operation to remove bubbles from the ink, one skilled in the art would have no reason to combine the references. Put another way, there is no reason one refilling an ink bag in the manner of Vollert and Scheffelin would look to and rely upon the teachings of Kirner that relate to normal printer operation, not ink bag refilling. So there is no basis for the combination of Kirner with the other references, and for this reason alone the rejection under § 103 cannot stand.

Applicants further submit that even if one skilled in the art were to combine Kirner with Vollert and Scheffelin, that still would not lead to the present invention. All that would be suggested is the use of Vollert's and Scheffelin's ink cartridges and filling schemes in Kirner's printing system. That system would have Kirner's flexible wall 9, and during routine operation, plate 9' would be actuated periodically to increase pressure in the system having ink cartridges from Vollert and Scheffelin to remove air bubbles from the ink system by raising the ink level in a capillary system.

Such a system still would not suggest at least the aspects of the claimed invention involving pressing the spent ink bag with a pressing plate to remove a quantity of residual ink.

For all the foregoing reasons the claimed invention patentably distinguishes over the combination of Vollert, Scheffelin and Kirner. Favorable consideration and withdrawal of this rejection are respectfully requested.

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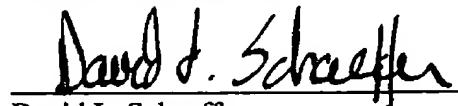
CONCLUSION

In view of the foregoing revisions and remarks, Applicants respectfully request entry of this Response After Final Rejection and submit that the present application is in condition for allowance.

Other than the fee required by the accompanying Petition for Extension of Time, no fees are believed to be due in connection with the filing of this paper. Nevertheless, the Commissioner is authorized to charge any fee now or hereafter due required during the prosecution of this application to Deposit Account No. 19-4709.

Prompt and favorable consideration are respectfully requested.

Respectfully submitted,



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